

Equilibrium constants for hydrolysis and associated equilibria in critical compilations

Indium

Equilibrium reactions	lgK at infinite dilution and $T = 298\text{ K}$		
	Baes and Mesmer, 1976	NIST46	Brown and Ekberg, 2016
$\text{In}^{3+} + \text{H}_2\text{O} \rightleftharpoons \text{InOH}^{2+} + \text{H}^+$	-4.00	-3.927	-3.96
$\text{In}^{3+} + 2\text{H}_2\text{O} \rightleftharpoons \text{In}(\text{OH})_2^+ + 2\text{H}^+$	-7.82	-7.794	-9.16
$\text{In}^{3+} + 3\text{H}_2\text{O} \rightleftharpoons \text{In}(\text{OH})_3 + 3\text{H}^+$	-12.4	-12.391	
$\text{In}^{3+} + 4\text{H}_2\text{O} \rightleftharpoons \text{In}(\text{OH})_4^- + 4\text{H}^+$	-22.07	-22.088	-22.05
$\text{In}(\text{OH})_3(\text{s}) \rightleftharpoons \text{In}^{3+} + 3\text{OH}^-$	-36.92	-36.9	-36.92
$1/2\text{In}_2\text{O}_3(\text{s}) + 3/2\text{H}_2\text{O} \rightleftharpoons \text{In}^{3+} + 3\text{OH}^-$			-35.24

C.F. Baes and R.E. Mesmer, *The Hydrolysis of Cations*. Wiley, New York, 1976, p. 327.

P.L. Brown and C. Ekberg, *Hydrolysis of Metal Ions*. Wiley, 2016, pp. 812–817.

NIST46, NIST Critically Selected Stability Constants of Metal Complexes: Version 8.0. Available at: www.nist.gov/srd/nist46

Distribution diagrams

These diagrams have been computed at two In concentrations (1 mM = 1×10^{-3} mol L⁻¹ and 1 μ M = 1×10^{-6} mol L⁻¹) with the 'best' equilibrium constants above (in green). Calculations assume $T = 298$ K for the limiting case of zero ionic strength (*i.e.*, even neglecting plotted ions).

